

BASEMENT

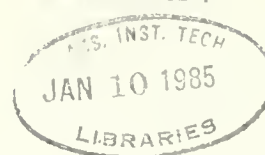






HD28  
.M414  
no.  
1613-84  
c.2

DEWEY



WORKING PAPER  
ALFRED P. SLOAN SCHOOL OF MANAGEMENT

CREDIT CONTRACTS IN THE G.D.R.:  
Decentralized Investment Decisions  
in a Planned Economy

by  
John E. Parsons

WP# 1613-84

November 1984

MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY  
50 MEMORIAL DRIVE  
CAMBRIDGE, MASSACHUSETTS 02139



**CREDIT CONTRACTS IN THE G.D.R.:  
Decentralized Investment Decisions  
in a Planned Economy**

by  
John E. Parsons

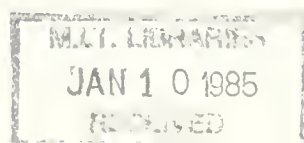
WP# 1613-84

November 1984

I would like to thank the faculty of the Economics Section at Humboldt University in Berlin for the generous assistance which they gave to me during my research visit there in the Autumn of 1983. I am especially grateful to Professor Karlheinz Tannert for the many hours of discussions which guided me in my studies and without whose assistance this work could not have been completed. My thanks extend as well to Professor Stoll and Dr. Lemke of the Staatsbank for their cooperation, to the staff of the libraries at the Economics Section of Humboldt University, the Hochschule fur Okonomie - "Bruno Leuschner", and the Staatsbibliothek, for their assistance, and to Dr. Heidrich for his aid and friendship.

This research was supported by a grant jointly funded through the Ministry of Higher Education in the German Democratic Republic and the International Research and Exchanges Board in New York.

Preliminary Draft. Comments welcome.  
Please do not quote without permission.





## 1. Introduction

The laws and regulations governing the granting of credit in the GDR stipulate a set of conditions which must be fulfilled by an enterprise before credit may be granted, and give to the state bank the right to require the fulfillment of additional, still more detailed, conditions as a prerequisite to the continued disbursement of credit allocated. These conditions regard the performance of the enterprise, the projected results of the investment project, and the relation between the actual completion of the project and the material compensation of the employees of the enterprise. A large portion of the negotiations to establish a completed credit contract is consumed in concluding an agreement on these conditions. This paper analyzes a number of these conditions to determine the role they have in assuring the efficient allocation of capital among enterprises and among investment projects in the GDR.

This paper focuses exclusively on the current set of conditions and the role which these conditions have in shaping the material incentives of enterprise management and the workforce of an enterprise in the choice of valuable investment projects and in the efficient implementation of those projects. The structure of credit relations which exist today in the GDR are the result of a rapid and complex development which began shortly after the conclusion of the Second World War. The list of the various conditions which are a part of the granting of credit has developed and grown during this time as well. By addressing exclusively the current form of these conditions we do not intend to overlook the historical forces which have given them shape and the national macroeconomic features which determine their relative necessity. Mention will be made in the paper of the part which both the history and the national economic needs have played in the development in

an attempt to illustrate that the role which we have chosen to discuss is a primary one at the current time and in the current situation and to illustrate that it is exactly for this stage in socialist construction that one would anticipate that the credit system would take this form.

The conditions for credit serve, as well, many distinct purposes within the system of financial and investment planning. In addressing exclusively the simple and immediate material incentives created by these conditions, this paper supplements the western literature on planning and planned economies which discusses primarily the role of material incentives in managerial decisions. On the other hand, since the subject at hand is a set of apparently administrative restrictions on management decisions this paper challenges the undue emphasis given and sometimes incorrect claims made in the western literature on the incentive role which untampered 'market prices' and 'profits' could and should play in allocating resources in a planned economy. Direct attention will be given to how these administrative and contractual conditions assure enterprise managers that the completion of efficient projects will add to their incomes and the completion of inefficient projects or delays in the completion of efficient ones will reduce their incomes. Finally, the paper helps to explain how the central planning authorities are able to use the banking system and the credit contracting process as an efficient equilibrium device by which investment proposals and decisions are made in a decentralized manner by the various managers of the enterprises undertaking the projects.

## 2. An Overview of Banking and Investment Financing in the GDR

### 2.1 The Banking System

We will begin our analysis of credit contracts with a brief introduction into the structure of the GDR banking and credit system.<sup>1</sup> The central institution in the GDR banking system is the Staatsbank der DDR. The Staatsbank is the bank of emission, the central accounting and clearinghouse institution for all financial transactions, and the central institution responsible for the allocation of credit. The Staatsbank is directly answerable to the Council of Ministers or the government of the GDR, and is responsible for carrying out the decisions of the government regarding monetary and credit policy. In particular, the Staatsbank operates as a fundamental part of the system of economic planning in close cooperation with the state planning institution, der Staatlichen Plankommission. The Staatsbank is subdivided along district lines in accordance with the administrative structure of the GDR, so that there is a 'branch' office in each Bezirk and Kreis. Moreover, the bank maintains an office at every major enterprise, and that office is responsible for managing the accounts of the enterprise and for handling the financial and credit affairs of the enterprise. The Staatsbank, then, incorporates within its operations the financial affairs of nearly all major productive institutions, and certainly of all major industrial institutions, the investment programs of which will be the subject of this paper.

In addition to the Staatsbank there is a separate bank responsible to the Council of Ministers for the allocation of credit to the agricultural, forestry, and foodstuffs sectors, die Bank fuer Landwirtschaft und Nahrungsgueterwirtschaft der DDR. The distinguishing character of the

economic sector which this bank serves is the existence of cooperatives which operate side-by-side with nationally owned enterprises. A third set of banking institutions is the Sparkassen, or savings institutions. These are locally administered banks which are responsible to the governing council of the Kreis or district in which the institution is located. The Sparkassen primarily maintain the personal savings accounts of GDR citizens, as well as a variety of financial or credit programs such as the housing construction program. Two other related institutions performing banking services for some segments of the population are the Deutsche Post and the Genossenschaftskassen fuer Handwerk und Gewerbe, the post office savings accounts and the credit unions of the craft and trade cooperatives. Finally, the Deutsche Aussenhandelsbank AG is the central government institution exclusively responsible for the planning and management of financial relations abroad. It handles all major transactions in foreign currencies, and conducts as well continual business and planning consultations with those enterprises that are involved in international trade. For these enterprises, the Deutsche Aussenhandelsbank maintains special accounts regarding foreign exchange transactions.

## 2.2 Enterprise Finance and Accounting

The subject of this paper is the credit relations in the primary economic sectors of the GDR economy -- e.g. manufacturing and extractive industry. These sectors are most generally distinguished by the institutions of the nationally owned enterprises. The financial sources for this sector may be divided into three fundamental components: 1) the direct earnings of the enterprise, 2) credit from the Staatsbank, and 3)

payments to and grants from the government budget. Insurance payments represent yet a fourth distinct source of funds for an enterprise according to the GDR accounting system. We will not discuss them in detail here, although the principles discussed in this paper may also be applied to the operation of the insurance system. Enterprises that are involved in international trade will also treat there foreign exchange transactions as a fifth distinct source of finance that is governed by separate regulations from the typical rules regarding earnings made on the domestic market. These transactions will not be given explicit treatment in this paper, although a careful analysis would reveal as well the application of the principles under discussion here to the finances of enterprises involved in international trade.

A set of regulations determine the proportion of the moneys earned by each firm that will be allocated to its various accounts or Betriebsfonds. The basic outline for the construction of the various funds is relatively simple.<sup>2</sup> Receipts from sales net of payments for material supplies and wages and other payments that are admissable costs will yield a figure which is, as an accounting category, analogous to what in the US is labelled 'profit before taxes'.<sup>3</sup> This figure will include a subtraction for depreciation -- Amortisationen or Abschreibung. The enterprise contribution to the state budget -- Abfuehrung -- will be determined as some fraction of this figure. Funds remaining are divided into various accounts which, for example, will be used for future capital expansion or to finance the replacement of machinery. These funds include the Investitionsfonds, the investment fund, the Fonds Wissenschaft und Technik, the fund for research and development, and two additional funds, the Reservefonds, and the Verfuegungsfonds. Also composed from this



figure are the various funds which finance the social benefits of the enterprise workforce, the Kultur- und Sozialfonds and the Leistungsfonds, as well as the funds which finance the bonus payments for management and the workforce, the Praemienfonds and the Gewinnfonds. Over the years of the development of the system of planning, the state planning organs have worked out a complex set of norms or standards by which the performance of each enterprise is measured. These last two sets of funds mentioned are composed from the remaining revenues according to the performance of the firm against the various norms established by the planning institutions.

### 2.3 Enterprise Planning of Investment

Two fundamental principles of the operation of nationally owned enterprises in the GDR are: "das Prinzip der Eigenwirtschaftlichkeit" and "das Prinzip der materiellen Interessiertheit der Betriebe" -- the principle of self-financing and the principle of the material interest of the enterprise in its operation.<sup>4</sup> In each year's plan an enterprise, in cooperation with the state planning organs, develops the list of commodities it will produce, the list of inputs it will use, and the list of performance figures which it will achieve during the coming year's operations. The execution of the plan is a much more refined and detailed problem than is actually specified in the plan, and therefore many decisions are made by the management of the enterprise and by the enterprise workforce. The ultimate financial performance of the firm depends upon the successful execution of the planned production, as well as the successful contracting of supplies, of deliveries, and of payments, all of which are done by the enterprise as a part of implementing the plan. The enterprise has considerable flexibility and responsibility for

the expenditures that it makes from the various accounts, especially as regards their expenditure over time. Enterprises which build positive balances in the capital expansion funds will deposit these with the Staatsbank and earn a return on these funds. This supply of funds is the primary source from which the Staatsbank allocates credit. Enterprises which are spending on capital allocations beyond their current balances will borrow for this purpose from the Staatsbank and repay the loans from the future allocations to these accounts, these allocations being themselves earnings from the project financed.<sup>5</sup> In addition, various enterprises may be allocated contributions to particular funds, such as the fund from which capital is replaced, through grants from the state budget according to formulas developed during the planning process. An enterprise's decisions regarding the current expenditures from each account and its performance in implementing these decisions will determine the future performance of the enterprise and thereby the future growth or lack of growth in these various accounts. It is through this connection between decisions, performance, and fund construction that the principles of Eigenerwirtschaftlichkeit and materiellen Interessiertheit create a material interest on the part of the enterprise workforce in the development of efficient and productive investment projects.

Our principle concern in this paper is the impact which the credit granted by the Staatsbank and the rules for the use and repayment of the credit has on the funds available to compensate the management and workforce and thereby on their material incentives. An enterprise which utilizes credit as a device to finance an investment project which improves the enterprise's performance relative to comparable enterprises or merely relative to what it would otherwise have produced will, as a

result, have at its disposal a proportion of the funds which are generated by that performance. We will rely upon this basic relationship in analyzing the impact of the rules and system for granting credit for investment projects. Some important results follow from this simple relation, which upon recognition should encourage in future research a more careful analysis of the detailed structure of the incentives produced by the credit system.

#### 2.4 Negotiating Credit Financing for Investment Projects

The enterprise receives credit for an investment project by making application to the Staatsbank. The application is made to the bank branch which is directly assigned to that enterprise. Applications are made for specific purposes or objectives such as the modernization of a particular production line with a chosen set of machinery. Although credit is granted for a specific purpose, each enterprise must conduct all of its financial affairs with the same bank office, and therefore each application for credit is actually but one event in a long standing and comprehensive relationship which will continue into the future. The decision to grant credit in each case is by law made in light of the full relationship and the full financial position of the enterprise. The bank branch office assigned to a particular enterprise is also by law a participant in the complete planning process for that enterprise.<sup>6</sup>

The law governing credit, die Kreditverordnung, distinguishes between two major classes of investment projects: those projects included in the plan, and those which are developed by an enterprise outside of the plan but for the purpose of improving the performance and objectives of the enterprise as given in the plan. Plans for the financing of investment



projects of the enterprise will, by design of the planning authorities, be such that the enterprise will need to request credit for various capital expenditures that are a part of its plan and credit will be made available in the central financial plans. Any expenditures for capital improvements that are not included in the plan must by law be partially financed by credit.<sup>7</sup>

Although the distinction between planned and out-of-plan investment projects is important, nevertheless, for both types of investment projects the management of an enterprise is largely responsible for proposing the major features of the project as well as the details for its completion. That a project is included in the plan only means that the enterprise and the central planning agencies have decided that some expansion or major development is necessary, that it should achieve some generally specified results in terms of commodity production, or that some new technology should be adapted to the current plant and equipment. The responsibility for developing a specific construction design, for choosing a specific manufacturing technique, for negotiating with suppliers of substitutable machines on the appropriate specifications and costs, and for proposing an efficient and useful output mix, is left to the enterprise management. If the management cannot develop a satisfactory design and a set of supplier contracts which meets the plan parameters, then the planning agencies may delay the project or the bank may deny credit and force a delay of the project despite the inclusion of the project in the plan. If the management develops a project design which is at variance with certain provisions of the plan parameters, but which shows outstanding performance on others, then the project may be accepted. Nevertheless, with projects included in the plan the benchmark against which the investment project is

compared is the set of purposes broadly outlined in the plan. For the second class of projects, those not included in the plan, the minimal criteria which must be satisfied if the project is to be granted credit are simply that the project be beneficial, that it be an efficient project, and that it not contradict the purposes of the plan, nor cause the enterprise to sacrifice other operations which are central to the plan. As with the projects specified in the plan, the management is responsible for choosing the design and schedule of implementation of the project.

An exception to this description occurs when an investment project is of major national size and importance, in which case it will not fall into either of the two classes of projects. Large portions of these structure determining projects will be centrally planned, including specific construction and operation designs. This type of project may be allocated credit, but a major portion of the financing will derive from direct grants out of the state budget. The decision to grant credit will be made at a central level and not subject to the same qualitative level of negotiations as the decision for the former two types of projects.

For the first two types of projects the enterprise management has a great deal of leeway in choosing a project design and ultimately in encouraging the go ahead or delay in a project. The choice and implementation of an investment project will therefore have a direct affect on the income of enterprise management over future years. Modernization programs will affect the amount of labor resources required to produce the enterprise's products as well as the level of accounting profits that will be registered in future years; the amount of labor employed and the recorded profit enter into the pay schedules and evaluation of management. Every investment project drains the enterprise temporarily of financial

resources that would otherwise be applied to various accounts which benefit the workforce or which pay the bonuses of the management. The management therefore has a direct concern regarding the current costs of a project and its future return. Hence, the management will consider in its decision to propose a particular investment project or particular plant or line design the impact which each possible project or design will have on its own income through the channels just discussed. Our analysis in this paper is therefore primarily targeted upon the two categories of projects described above as largely the design of the enterprise management.

The bank is obliged to grant credit when the plan both expressly intends that a particular capital project be implemented and that it be financed by credit; however, the bank is only obliged to finance it if the management of the enterprise presents an adequate proposal which meets both universally applied criteria and which meets the criteria outlined in the plan for this specific expenditure. Credit may be granted at the discretion of the bank for certain proposals, i.e. "out of plan" capital expenditures, if the bank feels that the management's proposal meets high standards of economic performance. Finally, the bank may not refuse credit to a project which clearly meets these standards simply on the basis that the project was not included in the plan. Credit is granted, or in some cases not granted, as a final result of a long period of contract negotiations between the enterprise and the bank.<sup>6</sup> The results of these negotiations are embodied in a series of documents beginning with what is analogous to a letter of intent, called in the GDR a Kreditzusage. During the negotiations the bank may impose various conditions on the enterprise which, if met, will obligate the bank to grant credit. These conditions, the Kreditvoraussetzungen, will be embodied in the Kreditzusage. Upon

satisfactory completion of the detailed preparations for a capital investment project, including for example the completion of contract negotiations with suppliers to assure the availability of materials, and the demonstration that the enterprise or its contracted agents have certified that the necessary workforce exists, the bank will complete with the enterprise a detailed credit contract, the Kreditvertrag. The contract will specify the purpose for which the credit is granted, the type of credit granted, the duration of the credit or the pattern of installments and a repayment schedule, the interest rate to be paid on the credit, and, in addition, a set of conditions regarding the continued operation of the enterprise and the execution of the investment program, i.e. the Kreditbedingungen, and the consequences and penalties to follow a violation of the contract. The choices available for these various elements of a credit contract are delimited in the laws regarding credit, the Kreditverordnung, and in more detail in the guidelines established by the Staatsbank, the Richtlinien.

### 3. The Economics of Credit in Socialist Planning

#### 3.1 Credit Policy in the GDR

Since the inception of a socialist economy in the GDR the banking and credit system has been viewed as a critical element of the planning system.<sup>9</sup> The decision to extend credit and the conditions of credit, including the rate of interest and the repayment schedule, have been considered important influences upon the material incentives of managers of enterprises. The actual importance of this influence in affecting investment decisions within the full planning system was nevertheless relatively minor during the early years of the socialist economy. Primary

emphasis was originally upon the establishment of the socialist system itself as opposed to the refinement of the mechanism and upon that category of investment project which was centrally planned. An increased emphasis upon the application of the credit instrument in shaping and utilizing the material incentives of enterprise management and the enterprise workforce occurred in the mid-1950's in the form of differential credit conditions, and as well in the extension of Rationalisierungskredite -- credits extended for minor investment projects designed to improve the efficiency of an enterprise operation or production line. The use of these credits to encourage the decentralized planning and implementation of efficient investment projects proved very successful. In the mid-1960's the financing of investment credit was conducted for the first time primarily through the use of negotiated contracts. This method was only used for its distinctive capabilities during the NOS (Neues Oekonomisches System) in the late 1960's, and used to its full in the credit arena following the establishment of a new credit law in 1972. Several years following the first introduction of Rationalisierungskredite and following the implementation of the credit contract, during the implementation of the NOS in the GDR in the late 1960's, the concept of structuring the terms of the credit contract differentially to create an incentive for efficient operation of investment projects became a primary component of the system of economic levers and instruments. The governing principle was that the terms of the credit agreement should be structured so as to create a similarity between the interests of society and the material interests of the enterprise management.<sup>10</sup>

Simultaneous with placing a greater emphasis upon negotiated credit conditions as an incentive device, the NOS implemented significant changes



in the planning and incentive systems for the state bank offices themselves. While this latter reform was reversed at the conclusion of the experimentation with the NOS, the greater role of credit as an incentive device was retained. In fact, subsequent to the NOS, credit negotiations gained a much more prominent role in structuring incentives and in perfecting the system of decentralized investment planning than they had occupied during the NOS. Two forces are responsible for this. The first is simply that at the outset of the NOS the bank offices were only beginning to learn how to apply the credit instrument as an incentive device, and as experience has been gathered its actual use vis-a-vis direct administrative control of investment planning has grown. Secondly, the economic nature of the development of GDR investments has drastically changed over time. This is expressed in GDR literature as the changeover from extensive capital expansion to intensive capital expansion, i.e. from *extensiv erweiterte Reproduktion* to *intensiv erweiterte Reproduktion*. This corresponds in some regards to a decline in investment projects which constitute entirely new production facilities, such as *Eisenhuettenstadt*, relative to investment projects which complement standing plant and equipment.<sup>11</sup>

Bank and credit operations have, since the changeover from the NOS, been given a special role in regard to establishing material incentives for the efficient planning and implementation of investment projects. A major component of a planning system is the establishment of broad targets and of standards for operations based upon the data obtained from the operations of all firms. Each firm or enterprise is then compared against the standard to determine how well it is performing and as a basis for paying its members an incentive fee. Since each firm is, however, facing circumstances and conditions that are peculiar to itself the standard or the average must be

adapted to these conditions. Moreover, various events occur during the operation or fulfillment of the plan which may hinder an enterprise's operation or which may facilitate it and which may not be due to the efforts of the enterprise workforce. In these events the enterprise should not be penalized nor given a bonus. One of the roles of the bank and of the credit negotiations is to adapt the incentive structure for each enterprise to its particular situation by modifications in the conditions and terms for credit or by negotiations regarding the projects to be financed.<sup>12</sup>

An important development in the design of the system of credit which occurred during the implementation of the NOS was the establishment of the principle that the credit is granted to the enterprise as a whole, that the decision to grant credit is taken in consideration of the enterprise's entire operations and its history and future plans. This principle is to be contrasted with the idea of credit being granted for a particular project independent of the additional operations of the firm. It is this second type of credit regulation which originally governed the banking system in the early years after the war; and although the system quickly abandoned this latter method for the former, it is the latter method which is widely presented in western texts on the subject as currently operative in the GDR and other centrally planned economies.<sup>13</sup> The switch is critical since all of the incentive devices which we will discuss in this paper can only successfully function in the context of the full operations of the enterprise, taking into account the influences of one project on the incentives derived from the acceptance of other projects. That the switch was in fact made is evidence that credit has developed in the GDR to fulfill the role which we are here presenting for it: there would be little purpose to such a principle in the framework of an arbitrary administrative or command system for allocating credit.

As we have described above, credit is negotiated between the state bank offices on the one hand, and the enterprise planning the investment project on the other hand. Similar negotiations occur between pairs of industrial enterprises whenever one is seeking to purchase or sell supplies to the other. This negotiation process is an important component part of the decentralized aspect of the planning process. The credit contract which results from these negotiations between the bank and an industrial enterprise as well as the supply contract negotiated between any two industrial enterprises are legally binding. The judicial supervision of the legal obligations of the enterprise and the bank branch in credit relations is nevertheless different from that of the legal obligations between two productive enterprises. Usually contracts between two enterprises are enforced in the courts, the Staatsgericht. In contrast, the obligation of the bank to extend credit, the reasonable character of the Kreditvoraussetzungen and Bedingungen, the success of the enterprise in meeting the conditions necessary to obtain credit, are all evaluated within the framework of the central planning agency. The decision to extend credit is considered a part of the planning process, and not comparable to a contract entered into by two enterprises. Enterprises, in the spirit of the principle of Eigenerwirtschaftlichkeit, are responsible for their relations with other enterprises. The state bank branches are, however, not independent enterprises operating under a principle of Eigenerwirtschaftlichkeit, but a component of the planning institutions. Hence, if the enterprise feels that credit is being denied by the bank branch in contradiction to the statutes, then the decision cannot be pursued as a lawsuit brought before the state court system, but must be referred to the planning organs which supervise the enterprise and the bank branch. In the



case of a completed contract which must be renegotiated or for which the adherence of the enterprise to the conditions stated therein are in question, the case must as well be referred to the appropriate authorities in the planning agencies. Only in the case of the bank's failure to perform its duties under the contract and consequent material losses to the enterprise is there an issue which is referred to the state courts.<sup>14</sup>

### 3.2 The Economic Theory of Kreditvoraussetzungen and Kreditbedingungen

It has long been recognized by economists that the market for loanable funds or credit cannot be viewed within the framework of the perfectly competitive commodity markets in which supply and demand forces lead to the establishment of a single market clearing price. A credit contract is not a perfectly enforceable contract -- some loans are riskier than others. Lenders will attempt to sort borrowers on the basis of readily identifiable characteristics, charging higher rates to some and 'prime' rates to other, more secure, borrowers. The application for the loan requires that the borrower provide information to the lender which may improve the lender's ability to identify the riskiness of a loan to this borrower and to thereby differentiate this loan from others with the inclusion of various conditions and the requirement that the borrower pay a higher rate of interest. Each loan is then a differentiated commodity, and the lender must make an effort to identify the type of borrower to which it is extending the loan. On this basis the lender will apply a distinct rate of interest for each type of borrower.

Within each type of borrower, however, the demand for loanable funds may be large. The lender needs to choose among the loan applications within each type of borrower, and needs to choose how to allocate the

available funds among the various type of borrowers. Within other commodity markets this would be accomplished by raising the price charged within each type and by raising the price on the least profitable type of commodity until the supply and demand for the commodity were equilibrated. It has, however, also long been recognized that the rate of interest cannot be simply raised to clear the current market for credit, even within distinct classes of identifiably similar borrowers. Every granting of credit entails the possibility of bankruptcy, in which case the agent receiving the loan will not incur the full loss from the failed investment. Although the identity of the borrower and the information on the loan application as well as various other devices may aid the lender in sorting credit application by risk type, these devices cannot be expected to do a complete or perfect sorting. Within each type of identifiably similar borrowers will be many borrowers of various levels of riskiness. A higher interest rate charge for any given identifiable type of borrower may clear the market for credit within that type by discouraging investors in relatively sound projects who will be forced to pay the entire burden of the higher interest rates. In contrast, an investor who is considering a very risky investment will be less discouraged by the higher interest rate since s/he will only pay the interest charges from her/his pocket with the small probability that the investment succeeds with a high payoff. In modern parlance this obstacle to the use of a fluctuating interest rate, or price, to clear the market for loanable funds is one of adverse selection.

In a capitalist economy the property of adverse selection in the market for credit implies that the rate of interest will be bounded above at a point determined by the need to avoid discouraging investors in secure projects from abandoning the market. This bound will, in a capitalist

economy, limit the quantity of funds which will be supplied to the credit market, and will thereby limit the efficiency of the market.

In capitalist economies several devices have been developed which have moderated the loss in efficiency in this market. It has been possible to design credit contracts with special structures for the time pattern of payments, with various reporting conditions and restrictions on the operations of the firm, and with various contingent agreements on the financial liabilities of each party, all of which are structured in such a manner that investors with risky projects will be at a disadvantage in accepting the contracts. This has enabled the suppliers of credit to discriminate among the projects that have been offered to them to be financed, and has enabled them to thereby improve the average financial return which they receive from supplying funds without at the same time raising the interest rate so high that they eliminate the demand for the funds. Many covenants and features of credit contracts employed in the U.S. serve this purpose.

A second type of constraint restricts the effective operation of the interest rate as an efficient incentive device. During the implementation of an investment project various obstacles may arise to the completion of the project and various events may adversely affect the other operations of the enterprise and its financial condition. The enterprise management has many decisions to make during the implementation of the project regarding the continued implementation, possible changes in scale, changes in construction schedules, or changes in technology and supplies. The management must as well make continual decisions regarding the maintenance and replacement of the capital stock. These decisions will all be influenced by the changing conditions surrounding the implementation of the

project and the other operations of the enterprise. Just as with the original choice of the investment project, due to the new situation of the firm it may be in the interests of the enterprise management to choose a new schedule for project implementation which is riskier than the schedule which would be acceptable to the lenders and which is economically justifiable. Although at the time of the original design of the project and when the lenders wrote the original loan agreement and thereby established the incentive structure, the material interests of the management corresponded to the interests of the lender, the changed conditions may alter that unless the contract for credit includes provisions which will be effective under this sort of contingency. This danger, that a subsequent decision on the part of management will, in the light of the management's familiarity with the new conditions, not be one which is in the interests of the lender is termed moral hazard. The danger from both moral hazard and adverse selection is that the choice of the management will be for a project which is much riskier than the one which the lender would choose. The distinction is in the time at which the decision is made, moral hazard being a danger that the management will subsequently take an inappropriate decision. The covenants which are included in Western lending agreements are designed as well to minimize the problems of moral hazard.<sup>15</sup>

In a socialist or planned economy the properties of adverse selection and moral hazard limit the extent to which the planners have an option available in using the rate of interest charge as a device for improving the incentives which enterprise managers have to choose efficient investment projects. Adverse selection prevents the central planners from simply relying upon differential interest rates in making an original allocation of credit, and moral hazard forces the bank offices to include

various intrusive restrictions in the credit contract and to intervene at various points in the implementation of an investment project.<sup>16</sup> Planners in the GDR have therefore chosen criteria other than the rate of interest as standards by which to allocate credit. These criteria have been progressively developed during the decades of experience with the planning system. This paper analyzes the set of conditions which state bank offices employ during the negotiations with an enterprise for a credit contract, and the contractual restrictions which the state bank requires be agreed upon as a part of the contract. The conditions are denoted Kreditvoraussetzungen and the contractual restrictions are denoted Kreditbedingungen. This analysis establishes the extent to which these criteria fulfill the role of efficient incentive devices comparable to the covenants employed in debt contracts made in the US.

### 3.3 Voraussetzungen

In this context the Kreditvoraussetzungen serve two distinct purposes, each of which are referred to in the GDR literature under the category of the Kontrollfunktion of the bank. The first of these two purposes is simply to distinguish secure projects from risky projects on the basis of various ex ante observable features of the project which are relatively straightforward signals of risk or quality. For example, the bank does not simply lend to an enterprise which claims to have developed an investment project which the enterprise estimates will yield a high and secure return. The bank requires instead that the management produce various pieces of information which will definitely be available if the project is as secure as is proclaimed. Minimally detailed engineering plans, proof of technological standards achieved in various countries producing competing products as well as



manufacturing tests indicating that the machinery to be purchased has demonstrated comparable results, and preliminary agreements with subcontractors indicating the availability of needed supplies -- these are all simple distinguishing devices which are required by the state bank office as a precondition for completing the negotiations for a credit contract. Each of these types of requirements are commonly used by banks in western economies. Separating various projects by their risk class allows the central authorities to apply differential interest rates to each risk class, or to apply differential conditions as a prerequisite for credit, which would amount to something like differential interest rates. The differential interest rates will therefore equilibrate and ration each segment of the market without thereby encouraging the exclusion of profitable and secure projects by diminishing the portion of the return which the management could claim as an incentive fee.<sup>17</sup>

The right of the bank offices to examine the documents and plans regarding a proposed investment project are secured in the Kreditverordnung. The bank has the right to have any documents carefully reworked or produced in greater detail. Moreover, the bank may participate in the discussions of the central planning agencies regarding the proposed project and in the 'defense' by the enterprise management of their plan proposals and can there present its opinion of the quality of the proposed project. This power to require more precise documentation of the economic variables, of the technological feasibility, or of the availability of the necessary inputs appears to be one of the primary powers of the bank which are exercised during the negotiations for an agreement to extend credit.<sup>18</sup>

The second purpose which the Kreditvoraussetzungen fulfill in this context is more complicated. The Kreditvoraussetzungen specify the manner

in which a contract may be altered according to how the project proposal meets various conditions. For example, each project must be partially financed by contributions from the enterprise's current funds or accounts -- the *Eigenmittelanteilung*. As mentioned above in the discussion on planning, the standard level of contribution by the enterprise or the 'norm' is determined as a part of the planning process. If an enterprise subsequently proposes a particular project for which various traditionally required conditions for an investment proposal have not been met, then the bank has the option to grant credit contingent upon a larger initial financial contribution on the part of the enterprise or upon other more stringent conditions which would represent a stake on the part of the enterprise management. This option represents an intermediate course of action for the bank between the two extremes of simply granting the credit despite the deficiencies on the one hand, and refusing the credit unless absolutely all conditions have been satisfactorily met on the other hand. The actual combination of conditions regarding the state of the project proposal which are met at the time that the bank agrees to extend credit and the final level of financial contribution by the enterprise will be decided during the period of negotiations following the agreement to complete a contract.<sup>19</sup>

Underlying the negotiations for credit, therefore, is the knowledge that by varying the required financial contribution or other parameters of the credit contract in response to the enterprise's performance of certain deeds, the bank is in fact offering to the enterprise a set of contracts with various features to each. The enterprise manager will choose that contract, if any, with the features most advantageous to that enterprise, given the project which the enterprise is proposing. By appropriately

constructing the selection of contracts which it is offering, the state bank can effectively place differential conditions on investment projects of different types or risk classes. In fact, the bank structures the set of contracts which it offers so that enterprises with inefficient projects will not accept any one of the contracts.<sup>20</sup> The set of contracts offered are then comparable to the selection which, in a capitalist economy, an insurance company would offer potential buyers or which various manufacturers of complementary products offer customers along the lines of price/quantity combinations or as various bundles of the two commodities.

The variation in the enterprise financial contribution, the Eigenmittelanteilung or equity contribution, serves this purpose of sorting or screening investment projects in an obvious manner. The condition that the firm raise its Eigenmittelanteilung is equivalent to demanding that the enterprise take a larger stake in the risky portion of the returns from the project by putting the funds in up front and only receiving funds in return after the credit is successfully paid back. In this manner enterprises with risky projects are discouraged from accepting credit. Without this requirement these enterprises could discount or ignore some of the potential losses from the project since the enterprise management would not be charged the actual value of the social loss in the form of a deduction from their bonus payments. The requirement that they contribute funds from their bonus accounts and other accounts, means that they immediately sacrifice income and receive it back only at the same time and on the condition that the bank is paid its principal and interest. Hence, the danger of bankruptcy is materially borne by the enterprise management, atleast to a larger degree than had the bank simply forwarded the funds for the entire project. In this manner, the set of contracts offered to managers is structured so that



managers who propose risky projects will sacrifice significant portions of their income and are unlikely to recoup that as a result of the current project. Therefore the system works to guarantee that managers themselves propose the more efficient projects, and not those which would otherwise simply augment their current income. This property of an incentive system is called 'self-selection' by economists.

The fulfillment of the Kreditvoraussetzungen is a precondition to the completion of a credit contract. In practice there have been cases of projects which were begun prior to the juridically formal completion of a credit contract. On the other hand, there have been cases of projects delayed beyond the current planning year, and at least one example of a project delayed five years, while the negotiations for a satisfactory contract continued. The emphasis upon the period of negotiations as a device for perfecting the design of an efficient investment project was developed during the 1960's, although its actual use as an effective device has markedly risen during the 1970's. According to a study of actual credit contracts negotiated in one region of the GDR, it is this second purpose for the Voraussetzungen, the attempt to encourage managers to choose the most efficient variant of a project available, which predominates over the first purpose or the attempt to categorize projects and thereby refuse credit to some. Of course, the study is based upon actual applications for credit and is therefore subject to a selection bias. It is not possible in this manner to observe which projects are not proposed which would be proposed without such a mechanism. The effect of the second purpose of the Voraussetzungen, to encourage the choice of the more efficient projects, is felt primarily as the encouragement of the most efficient design of the fundamentally same project, as opposed to the choice of one type of project over another project of different purpose.<sup>21</sup>

### 3.4 Bedingungen and the Conditions of a Credit Contract

The Kreditbedingungen are, in contrast to the Voraussetzungen, particular clauses included in the contract which regulate the use of the credit and the operations of the firm during the period governed by the credit contract. In the following section we will discuss various Kreditbedingungen and examine the influence which the Bedingungen have upon the incentives of the management to implement efficient investment projects. Since these are primarily designed to influence the material incentives of the enterprise in correctly carrying out the project they are discussed in the GDR literature primarily under the category of the Stimulierungsfunktion of the bank.

One possible Kreditbedingungen which the bank may demand be included in the credit contract is a Buergschaft. A Buergschaft represents an assurance by a third party that certain elements of the credit contract and operations of the investment project will be implemented successfully. For example, if a manager of an enterprise which is a part of a Kombinat is planning to implement a new technological process, then the bank may demand that the management of the entire Kombinat accept to sign a Burgschaft for the successful operation of the new technology.<sup>22</sup> The Burgschaft affects the economic incentive system by bringing in a third party, and assigning to the third party liabilities for the failure of the project. The third party will accept to assign the Burgschaft when it has the capacity to verify the expected success of the project and when it maintains some interest in the successful completion of the project. In general one may assume that the cooperation of the third party is in some manner necessary to the successful completion of the investment project and that the Burgschaft serves to either verify the completion of necessary agreements

between the primary contractor and the third party. Alternatively, the third party may have had a long standing relationship with the primary contractor, so that the Burgschaft simply makes use of the already completed technical discussions between the primary contractor and the third party. The third party having already entered into detailed discussions or negotiations with the primary contractor is prepared to testify or assure the bank of the risk class of the planned investment project or of some particular aspect thereof. By using the third party's preexisting expertise the bank is able to avoid making a duplicative analysis of whether or not the necessary technical preparations have been completed or of how risky is a new line of machinery -- a task at which the bank may not be expert.

A slight variation on the concept of a Burgschaft is the power of the bank to demand an independent audit, eine Begutachtung, regarding the implementation of or plans for the construction of an investment project.<sup>23</sup> The auditor provides the bank with independent verification of the facts at issue. The critical distinguishing feature of the auditor is that it does not have the same material interests as the enterprise management, in fact has no material interest in the continued operation of a poorly planned and executed investment project. Since the auditor does not have a material interest in the start up of a risky or poorly planned investment project, the auditor is willing to critically evaluate the project and recommend its redesign or abandonment whenever readily available information exists to warrant such a recommendation. The important role of such independent audits in capitalist economies has been often stressed in the economics literature on incentives and information.<sup>24</sup> Many of the problems which plague the use of such agencies in the U.S. are not present in the GDR: the

auditor never has an ongoing business with the client to be audited, and the auditor has no stake in maintaining the long life of a particular project so as to maintain the fees deriving from its services on that project.

One final variation on the requirement for a Buergschaft is a simple requirement that at various deadlines during the planned completion of a project the enterprise produce various documents or contracts with suppliers to verify the completion of specified elements of the investment project. These documents are evidence of work completed or plans for work agreed to by outside parties. The requirement that the enterprise produce these documents provides to the bank office a signal regarding the on going state of the investment project. If the primary contractor has fallen behind in the implementation of the project, then many portions of the project will be delayed. This will then be evidenced to the bank offices by the lack of completed contracts or invoices for the specified work or portion of the project. When the documents or invoices are not forwarded to the bank, then the bank learns that the work has not been completed. When supplier contracts are not forwarded to the bank, then the bank has a yet earlier warning that the work has not in fact been satisfactorily planned ahead of time. On the other hand, when the documents are produced on time, then the bank is assured of the on time state of the project implementation.<sup>25</sup>

These various types of contractual clauses are common in many loan agreements negotiated in Western economies. For example, in the shipping industry credit contracts often specify a dry-docking or maintenance schedule that must be satisfied with an arrangement between the shipping firm, i.e. the borrower, and a third party who performs the

maintenance.<sup>26</sup> Hence the lender obtains a guarantee via a third party that the ships for which it is extending loans are being maintained and that these ships therefore retain their market values. The third party or dry-docking firm has every incentive to complete the maintenance since it profits thereby, and therefore has as well an incentive to correctly report the non-performance of the maintenance. In this manner, the lender avoids having to incur the risk that the collateral for the loan will be spent in yielding fast dividends to the shareholders of the shipping firm.

The use of a Burschaft or a similar requirement to enter into contracts with various parties can similarly guarantee to the central planning authorities that the management of the enterprise is including various costs in the calculations of the profitability of the investment project. These costs may be either the costs of risk associated with possible damage to the machinery through accidents or 'acts of God', or may be social costs such as those associated with pollution control. The former costs, the costs of the risk of damage or loss from accidents, may be included by the requirement that the enterprise purchase insurance. This requirement is a standard one for GDR investment projects. In the case of the latter costs, external costs of the manufacturing operation, there is a larger variety of options and a larger variety of policy decisions to be made. The use of a Burschaft or a requirement to enter into specified contracts with other enterprises is one particular alternative available for including otherwise external costs into the calculations used for evaluating the worth of the investment project. This device permits the central planners to enforce a nationwide consideration for external costs while maintaining decentralized planning of the investment project.



For example, if central planners seek to guarantee that the expansion of coal mines proceeds only in areas satisfying certain requirements regarding reclamation, bank offices will be instructed to extend loans only under provision that contracts arranging for reclamation of the territory to be mined are signed with a third party. These contracts will have to provide for reclamation at established standards. As a result of this stipulation enterprise managers will incorporate the charges made by the third party for the reclamation in their assessment of whether or not the revenues of a particular expansion project will suffice for payment on the loan and the desired additions to the bonus fund. This provision for reclamation may be adapted to the level of priority which the central authority places upon reclamation versus the cost of exploitation. However, whatever the standard or priority, the provision guarantees that individual projects will not be adopted which violate the centrally determined standard when there still exist opportunities for exploitation in land that is more economically reclaimable.

A second major provision of the credit contracts which will be affected by the Bedingungen is the schedule for disbursements and payback. A principle of socialist banking is that this schedule should correspond with the addition to earnings that is generated by the project -- die erwirtschaftet Mehrproduktions des Investitionsprojekt.<sup>27</sup> The principle insures that the contract protects the funds which society has available for capital investment projects from being put to a risky use by the management of the enterprise. In analyzing a particular loan the bank offices are making a decision regarding the commitment of social funds for a given period of time to an investment in a particular risk class. As the firm receives the income from the project it will inevitably have to assign

those funds to some use, which could for example include a reinvestment of the funds. If the funds are left free, that is if they remain in the accounts of the enterprise, then the firm has the opportunity to reinvest the funds in projects significantly riskier than those for which the bank loan was originally extended. By stipulating a payment schedule that is coincident with the expected returns from the project, the bank is maintaining tight control over free funds at the disposal of the firm, and assuring that additional investments in riskier projects are made with the full cooperation, approval, and contractual conditions that the bank would otherwise place upon them.<sup>28</sup>

In addition to this general assurance that the enterprise does not have funds available to use for projects to which those funds were not earmarked, the bank maintains strict control over the accounts to which credit is assigned and the objectives to which it may be applied. Hence credit moneys may not be used to pay obligations other than those for which they were granted. This provides additional assurance that the funds are not used for unauthorized projects which do not conform to the social interest.<sup>29</sup>

Similar provisions regarding the pattern of payments and its relation to the operation of the investment project are quite common in lending in western economies, especially in the area of natural resource development where the collateral for a loan is often the supply of resources remaining in a particular plot. As the project is implemented or the resource is extracted, the collateral is thereby depleted or diminished. To prevent the firm from thereby expropriating the bank of its return on the investment the loan agreement usually includes provision for a sinking fund. The mining corporation must make contributions to the sinking fund

at a rate which corresponds to the rate of extraction of the resource. In this manner, payments to the loan are made to correspond to the profits derived from the project.<sup>30</sup>

A second supplementary principle regarding the repayment period in the GDR is that credit may not be granted for long periods of time without a repayment required and a renegotiation of further credit to be granted for the continued operation of the enterprise and continued implementation of the investment project. Five years is a standard limit although there exist procedures for extensions. Hence, a firm which develops difficulties in completing a project does not have the funds available at its disposal to ride out a period of difficulties without returning to the bank to report its current difficult position. This necessity gives to the bank the special opportunity to review the operations of an enterprise at every point in time during which the operation runs into difficulties. This opportunity is valuable as an early basis for correcting mistakes in the implementation of investment projects and for preventing the continued disbursement of funds to projects which do not offer a satisfactory return on the incremental investment. The importance of this reason for the pattern of repayment has been given explicit pronouncement in GDR analyses of the control which the bank exercises over the implementation of investment projects.<sup>31</sup>

In addition to these three principles regarding the repayment period, the credit Bedingungen will include a set of specifically negotiated and carefully designed conditions or parameters regarding the financial operations of the firm. The financial conditions will state, for example, that the firm must maintain a certain ratio of working capital to fixed capital in its operations. This requirement assures that the firm does not attempt to delay a reckoning of its difficulties by consuming its fixed



capital above the optimal rate, e.g. by not executing various maintenance or replacement operations, and thereby increasing the risk of its operations. When such a provision is violated, the enterprise must return to the bank to explain the current situation and to justify the continued implementation of the investment project. Similarly, when an enterprise fails to utilize a loan on the date at which it was contractually made available, then the enterprise has violated the provisions of the loan. Such a failure signifies a delay in the implementation of the project and a potential change in the profitability of the project. These provisions, then, serve two distinct purposes: they prevent the management of the enterprise from assigning funds from one purpose which may be relatively standard and riskless to an alternative use, for example the extension or continuation of an extremely risky project; and in addition they warn the bank of the changing risk character of an investment project in operation.

Again, similar restrictions are commonly placed upon loan contracts completed in western countries. This is especially true for the restriction in disbursement of loans so that the bank reviews the operations of the firm at various points in time to consider the wisdom of continued extension of its positions or commitment. It is also true of restrictions on the maintenance of working capital requirements and prohibitions on the operations of the firm. Typically these provisions are violated by the corporation and their violation is given consent by the lender. Otherwise, one would imagine that since these provisions restrict the flexibility of the firm, they would decrease its value; however, since the bank permits their violation after it has the opportunity to use the occasion to review the project and to guarantee that the particular request for a violation is not being used to compromise its interest, these

provisions are considered a device for increasing the value of the projects in which the firm is investing.<sup>32</sup>

Finally, the large majority of Kreditbedingungen included in most contracts relate to various technical parameters regarding the operation of the project and the enterprise. For example, they will specify a schedule which must be observed in the implementation of the project and various checkpoints or milestones for the project including levels of production during the early start-up stages, or dates and specifications for the successful completion of test runs on machines purchased and installed for the project. This set of parameters complements the requirement that the firm return to the bank periodically for credit. They guarantee that a periodic review occurs even when there is no shortage of funds, and that this review proceeds although there may not be any serious difficulties. The enterprise will not be held up by the need to negotiate an entirely new contract, but must nevertheless report periodically to the bank its operations and enter into discussion to clarify current conditions.<sup>33</sup>

The emphasis upon such specific technical provisions certainly distinguishes credit contracts in the GDR and probably in other socialist countries as well from contracts written in capitalist countries.<sup>34</sup> However, it would be erroneous to imagine that such provisions are an artifact of the planning process and administrative as opposed to 'economic' control. Such technological conditions have their counterparts in western loan agreements. For many major industrial projects in capitalist countries the financing is arranged by creating a distinct legal entity which will execute the project. The loans to that entity which are extended by banks include provisions for the start-up and operation of the project, provisions which specify in detail similar technical

parameters.<sup>35</sup> Correspondingly, the internal extension of funds within a corporation to a particular investment project will typically be audited and monitored in terms of various technical parameters. This internal distribution of funds is quite significant, almost a 'market' in itself for many corporations, and may therefore be the appropriate object of comparison.

These conditions on the technical operations of the firm and the implementation of the project fulfill as well one additional purpose quite distinct from the one discussed just above. By permitting the bank periodic review they allow the bank to alter the contract depending upon the outcome of various indicators of performance. They are thereby the device with which the Staatsbank is able to transform the credit contract into a much more complicated 'contingent contract', as it would be called in the economics literature. This allows the bank to impose more stringent conditions upon the enterprise if the initial implementation of the project reveals that the project is much riskier than was originally believed. Hence they permit a much finer sorting of projects than would have been permitted if the contract were to be made and consummated exclusively upon the basis of the original proposal and information. A similar opportunity for the review of an ongoing project exists due to the bank's opportunity to continually review the operations of the firm. Without any special inclusion into the credit contract the legal basis for the contract is dependent upon the full operations of the firm. If the condition of the firm deteriorates or is otherwise drastically altered during the period for which credit has been granted, then the original contract must be renegotiated.

1. The presentation given here, and in the section following, of the institutional structure is based upon Willi Ehlert, Gerd Gebhardt, Johannes Gurtz, Diethelm Hunstock, Klaus Kolloch, and Karlheinz Tannert, editors, Sozialistische Finanzwirtschaft, Verlag die Wirtschaft, Berlin, 1981. Details presented in the section following regarding the principles of the credit system itself are to be found in Willi Ehlert, Diethelm Hunstock, and Karlheinz Tannert, editors, Geldzirkulation und Kredit in der sozialistischen Planwirtschaft, Verlag die Wirtschaft, Berlin, 1976, hereafter referred to as GKP. Two very good, simpler, presentations are Gerd Gebhardt, Johannes Gurtz, Waldfried Schliesser, and Wilhelm Schmidt, Finanzen und Finanzsystem im Sozialismus, Dietz Verlag, Berlin, 1981, and Willi Ehlert, Klaus Kolloch, Waldfried Schliesser, and Karlheinz Tannert, Geldzirkulation und Kredit im Sozialismus, Dietz Verlag, Berlin 1982, hereafter referred to as GKS.

2. An excellent introduction and overview of the construction and definitions of the various funds with which the industrial enterprises operate is given in Alexander Blei, Leitfaden zur Finanzierung der volkseigenen Industrie, Verlag die Wirtschaft, Berlin, 1978. See also Horst Marx, Fred Matho, Uwe Moeller, and Gerhard Schilling, Die wirtschaftliche Rechnungsfuehrung, Dietz Verlag, Berlin, 1981, or for a summary in English of the system during the NOS, a summary which essentially remains valid, see David Granick, Enterprise Guidance in Eastern Europe, Princeton University Press, Princeton, 1975, pp. 132-209.

The legal basis for the construction of the funds is unfortunately strewn throughout a large number of separate pieces of legislation. Of particular importance for the financing of investment projects is the "Finanzierungsrichtlinie fuer die volkseigene Wirtschaft vom 21. August 1979," Gesetzblatt der DDR, Teil I, 1979 (hereafter abbreviated GBl., and using the convention of listing the part or 'Teil', the issue number when available, and the year in sequence broken by slashes, e.g., I//79). See also the "Anordnung ueber die Planung, Bildung, und Verwendung des Leistungsfonds der volkseigenen Betriebe vom 15. Mai 1975," GBl. I//75, the "Anordnung ueber die Finanzierung und Stimulierung wissenschaftlich-technischer Leistungen in der DDR vom 18. Dezember 1972," GBl. II//72, the "Verordnung ueber die Planung, Bildung und Verwendung des Praemienfonds und des Kultur- und Sozialfonds fuer volkseigene Betriebe im Jahre 1972 vom 12. Januar 1972," GBl. II//72, and finally, the "Anordnung ueber die Anwendung vom Stimulierungssaetzen fuer den Praemienfonds bei Ueberbietung der staatlichen Aufgaben zur Ausarbeitung der Jahresvolkswirtschaftsplaene vom 5. August 1981," GBl. I//81.

3. Care should be taken in the use of the terminology 'profits'. By choosing the terminology 'profits before taxes' we mean here to emphasize that this is an accounting number which, even in a capitalist economy, is distinct from the funds that are actually at the disposal of shareholders or at the disposal of the company management for disbursement on behalf of the shareholders. Perhaps a more analogous category would be the accounting number representing 'earnings' for a single division of an integrated corporation. Authors in the GDR are careful not to confuse the base against which the performance of the enterprise is evaluated and upon which the contribution to the various funds is calculated with the category of profits used in capitalist economies; instead, they refer to the Rentabilitaet of an investment project. A comparable term might be the rate of return on the project.



4. For a good overview of these and other principles relating to the accounting and planning system for the enterprise see Marx et al., Die wirtschaftliche Rechnungsfuehrung, esp. pp. 56-61. The application of these principles to the extension of credit and to the general problem of the financing of investment projects is consistently given explicit attention in Ehlert, et al., GKP, chapter 3, "Der Einsatz des Kredits zur Finanzierung, Stimulierung und Kontrolle in Zweigen und Bereichen der Volkswirtschaft," pp. 169-271. The legal expression of this principle is to be found in the "Verordnung ueber die volkseigenen Kombinate, Kombinatbetriebe und volkseigenen Betriebe," GB1. I/79, p. 356.

5. For a discussion of the control of the entire system of balances in the state bank and the macroeconomic principles involved in controlling the aggregate level of credit and investment financing see the various contributions to the Humboldt University volume: Willi Ehlert, Wilhelm Schmidt, and Guenter Radtke, editors, Problemen der Ausnutzung von Geld und Kredit, Wissenschaftliche Schriftenreihe der Humboldt Universitaet, Berlin, 1972.

6. That credit is allocated for specific purposes is specified in the "Verordnung ueber die Kreditgewaehrung und die Bankkontrolle der sozialistischen Wirtschaft," Gesetzblatt der DDR, I/6/82, pp. 126-135, hereafter referred to as die Kreditverordnung, in II-2-(3), denoting part II, section 2, abschnitt or paragraph 3: "Die Kombinate und Betriebe haben Kredite zweckgebunden entsprechend den im Plan festgelegten Leistungs- und Effektivitaetszielen zu verwenden. ..." (p. 127). Garvy discusses this as what he refers to as the second principle of socialist credit: "each loan must be made for a specific purpose and be identifiable as to end use..." (Money, Banking, and Credit in the Soviet Union and Eastern Europe, M.E. Sharpe, Inc., White Plains NY, 1979, p. 114). Zwass refers to this as the third principle: "Special stress was placed on earmarked credits, particularly during the first phase of development. To facilitate bank control, credits were tied to specific items in the working assets, such as raw materials, finished products, and so forth, rather than being injected into the economy as an anonymous purchasing power" (Money, Financial Flows, and Credit in the Soviet Union, National Bureau of Economic Research and Ballinger Publishing Co., Cambridge MA, 1977, p. 118).

That applications for credit are judged in terms of the full financial condition of the firm is specified in the Kreditverordnung III-7-(1), "... In die Bankkontrolle werden alle Mittel der Kombinate und Betriebe einbezogen, die fuer die Finanzierung von Investitionen eingesetzt werden." See also, Eberhard Goldhahn, Sozialistische Geschaeftsbeziehungen zwischen Bank und Betrieb -- ihre rechtliche Ausgestaltung, Staatsverlag der DDR, Berlin, 1969, pp. 50-52.

Finally, the bank's right to participate in the planning process is given in the Kreditverordnung II-4-(4) and III-7-(2).

7. For this distinction between planned investment and investment out-of-plan see the Kreditverordnung, I/6/82. The discussion of credit outside of specifically planned investments is included in several sections of which two are primary:

II-3-(3), "Fuer Massnahmen, die der Erhoehung der volkswirtschaftlichen Effektivitaet ueber den Plan hinaus dienen, zu einer hoeheren oder vorfristigen Planerfuellung fuehren oder aus anderen Gruenden im besonderen volkswirtschaftlichen Interesse liegen, kann die Bank zusaetzliche Kredite gewaehren und dafuer als staatliche Foerderung einen Abschlag vom Grundzinssatz bis auf einen Zinssatz von 1,8% festlegen. Die Bank macht den Zinsabschlag von der Erreichung konkreter Leistungsziele oder Normen bzw. Erfuellung anderer Bedingungen abhaengig."

III-7-(9), "Zur Durchfuehrung von Rationalisierungsinvestitionen, die der schnellen Erhoehung der Produktion bzw. Leistung, Effektivitaet und Qualitaet sowie der Einsparung von Energie und Material dienen, koennen Rationalisierungskredite fuer Investitionen ueber die staatliche Plankennziffer 'Investitionen (materielles Volumen)' hinaus auf der Grundlage von Rechtsvorschriften gewaehrt werden, wenn diese Investitionen durch Mobilisierung von Reserven und ohne Inanspruchnahme staatliche bilanzierter Fonds durchgefuehrt werden sollen. Voraussetzung ist, dass dadurch im Jahr der Inbetriebnahme ein zusaetzlicher Nutzeffekt entsteht, der zur Kreditrueckzahlung heranzuziehen ist. Wird ein besonders hoher Leistungs- und Effektivitaetszuwachs erreicht, kann die Bank hierfuer Zinsabschlaege bis auf einen Zinssatz von 1,8% gewaehren."

Granick is not correct in supposing that 'above-plan' credits were eliminated in 1971 (Enterprise Guidance, p. 159 fn. 55).

On the planned level of credit and its relation to the other funds available to the enterprise, see Ehlert, et al., GKP, pp. 179, 188-194, and the "Finanzierungsrichtlinie fuer die volkseigene Wirtschaft," GB1. I/28/79.

8. That the bank has the right to deny credit or to offer credit only in a smaller amount than requested is guaranteed in the Kreditverordnung, II-2-(6) and V-16-(1).

9. For general references regarding the historical development of the system of planning and financing investment and of the banking system see, Alfred Lange, Die Investitionen in der volkseigenen Industrie der DDR im ersten Planjahrfuenft, Verlag die Wirtschaft, Berlin, 1958; Erhart Knauthe, Oekonomischer Nutzen und Finanzierung von Investitionen in der volkseigenen Industrie, Verlag die Wirtschaft, Berlin, 1958; Manfred Raetzer, "Die Entwicklung der Investitionsfinanzierung in der DDR," Wissenschaftliche Beitraege der Martin-Luther-Universitaet, Halle-Wittenberg, 1966, Nummer 29; Joerg Roesler, Die Herausbildung der sozialistischen Planwirtschaft in der DDR, Akademie-Verlag, Berlin, 1978.

Some early teaching manuals which expound the objectives of the banking system at the time of its early operation include: Heinz Joswig, "Die Entwicklung und die Struktur der Banken in Deutschland," Geld und Kredit, Lehrbrief 1, Verlag die Wirtschaft, Berlin, 1957; Heinz Joswig, "Das Banksystem der DDR," Finanzen und Kredit, Lehrbrief 6, Verlag die Wirtschaft, Berlin, 1958;. In the same series of Lehrbriefe are several booklets which outline the principles for extending credit during the early years of the socialist economy: D. Herold, "Der Kredit in der DDR," Finanzen und Kredit, Lehrbrief 8, Verlag die Wirtschaft, Berlin, 1958; W. Heinecke and D. Herold, "Kurzfristige Kredit," Geld und Kredit, Lehrbrief 4, and K. Maier, "Investition und langfristige Kredit," Geld und Kredit, Lehrbrief 7, Verlag die Wirtschaft, Berlin, 1957.

An early work on the development of credit as a device for comprehensively influencing the material incentives of the enterprise is



Edwin Polaschewski, "Probleme der Analysentaetigkeit der Industrie-Bankfilialen und der Ausnutzung des Zinses im System der oekonomischen Hebel," Habilitationsschrift der Hochschule fuer Oekonomie, 1964. Once again, manuals for training the personnel of the bank system exist which illustrate the operative conception of utilizing credit to affect the material incentives during the period of the NOS: Herbert Finger and Karlheinz Tannert, "Die Grundlagen der Ausnutzung des Kredites im produktiven Bereich," Geldzirkulation und Kredit, Lehrbrief 4, Hochschule fuer Oekonomie, Berlin 1969; "Die Gestaltung sozialistischer Geschaeftsbeziehung zwischen Bank und Betrieb -- Die Gewaehrung von Krediten zur Finanzierung der Grund- und Umlaufmittelsphaere in der volkseigenen Industrie," Banken und Sparkassen, Fachschule fuer Finanzwirtschaft, Gotha, 1970; W. Luchterhand and U. Hoffman, "Grundlegende Anforderungen des oekonomischen Systems des Sozialismus an die Organisierung des Kreditsystems in der DDR," Geldzirkulation und Kredit, Lehrbrief 4, Zentrum fuer wirtschaftswissenschaftliche Information, Berlin, 1971. A comprehensive analysis of the role of the bank in extending credit and its influence on the operations and planning by the enterprise under the NOS is given in Goldhahn, Sozialistische Geschaeftsbeziehungen.

For the period directly following the abandonment of the NOS see: Claus Biefeld, Grundriss der Wirtschaftsrechts der DDR, Martin-Luther-Universitaet, Halle-Wittenberg, and Karl-Marx-Universitaet, Leipzig, 1979, and Klaus Lemcke and Lothar Schaefer, Die Durchsetzung der Kredit- und Zinspolitik gegenueber den volkseigenen Betrieben und Kombinaten, Fachschule fuer Finanzwirtschaft, Gotha, 1975.

10. For a statement that the objective in adapting the material incentives of the enterprise is to make them coincident with the general interests of society, see, among many possible sources, Marx et al., Die wirtschaftliche Rechnungsfuehrung, p. 59. That the objective in designing incentive systems is precisely one of creating a commonality of interests between the management of an enterprise and society has been recognized in the incentives literature of modern western economic theory. See Stephen A. Ross, "On the Economic Theory of Agency and the Principle of Similarity," in M. Galch, D. McFadden, S. Wu, eds., Essays on Economic Behavior Under Uncertainty, North-Holland, Amsterdam, 1974.

That credit in the GDR currently has a primary role to play in structuring these incentives is stated in Ehlert, et al., GKP, pp. 169-193. That the history of the development of this credit apparatus is connected with the development in the planning apparatus of decentralized planning and execution of investment projects is the theme of Roesler, Die Herausbildung, pp. 171-180. Granick also documents the major role given banks and credit relations in affecting the incentives of enterprise management in Enterprise Guidance, pp. 158-161.

Another, broader and more subtle GDR literature related to this issue regards the subject of 'Ware-Geld Beziehungen' and the 'Begrenzte Wirkung des Wertgesetzes' -- 'Commodity-Money relations' and the 'bounded operation of the law of value'. While the literature is a difficult one for western economists to penetrate due to its Marxist basis, it is extremely valuable in understanding two critical aspects of credit operations in the GDR. The first aspect is the historical development of the credit relations, and the extent to which economic and political conditions at any point in time permit the delegation of certain control functions to financial devices.

The second aspect is the differential role which credit relations are delegated in different branches of the economy and between different agents in the economy. The literature on these two subjects makes clear the conscious nature of the role which credit has been given in the economy, as well as the basis for the bounds which have been placed upon it.

11. For a discussion of the actual conclusions made by the SED from the experiences of the NOS in the realm of the banking system and the actual changes made in banking and credit regulations subsequent to the NOS see footnote 14.

For a discussion of the essential difference between structure determining projects or large projects developed ab novo and plant and equipment which complements existing capital equipment in regards to utilizing financial devices for incentive control as opposed to administrative norms and salary schedules see Horst Hesse, *Die Stellung des Investitionskredites im System der Finanzierung der Investitionen in der volkseigenen Industrie und seine Ausnutzung fuer die Intensivierung der Produktion*, Dissertation zur Promotion A, Karl-Marx-Universitaet Sektion Wirtschaftswissenschaft, Leipzig, 1979, p. 75. Hesse explains there the reason why the former type of project cannot be controlled in the same manner as the latter type of projects through financial incentive devices such as those discussed in this paper. His argument is that since the financial results of the investment are evidenced only at a late date, control by the planning agencies cannot be made contingent upon the financial parameters and therefore be primarily exercised through the bank, but must in the interim be based upon various technical parameters and therefore be exercised by another institution within the planning apparatus. I presented a similar argument in a paper on "Devices for Decentralizing Investment Decisions in the GDR," delivered at the Midwest Slavic Scholars Conference, 1983. See also Ja.G. Liberman, Das Gesetz der sozialistischen Akkumulation, Akademie-Verlag, Berlin, 1974, p. 346.

12. For the legal basis for this special role see the Kreditverordnung II-5-(1). See also Goldhahn, Sozialistische Geschaeftsbeziehungen, pp. 53-54.

That the incentive system must be reconditioned on the peculiar situation of each enterprise at any point in time is established in Bengt Holmstrom, "Moral Hazard and Observability," Bell Journal of Economics, 10 (1979), 74-91. The difficulty involved in actually designing a codified incentive system which incorporates each possible contingency is raised in Barry Nalebuff and Joseph Stiglitz, "Prizes and Incentives: Towards a General Theory of Compensation and Competition," Bell Journal of Economics, 14 (1983), 21-43, esp. 27-28. Nalebuff and Stiglitz speculate that tournaments are one simple way of adapting incentive structures to changing conditions without extensive administrative deliberations and actions. A comparable purpose is served in investment financing in the GDR by permitting the bank offices to evaluate each new investment proposal in light of the then current conditions and the experience the bank office has had with other enterprises.

13. See Garvy, Money in the Soviet Union, pp. 114-115 ff., and Zwass, Money in Eastern Europe, pp. 118-119, 146-148.

14. See the Kreditverordnung, II-4-(4) and V-18-(1,2,3). I am indebted to Prof. Dr.habil. Horst Oertel and Dr.sc. Eberhard Goldhahn of the Sektion Wirtschaftswissenschaft der Humboldt Universitaet for calling my attention to this distinction and for pointing out to me the basis for and importance of it.

This distinction between the branches of the state bank and productive enterprises as economic institutions of different character, with different relationships to the central planning apparatus and with different possibilities for the application of material incentives and economic controls or levers developed to its present form out of the experiences of the NOS. This distinction represents one of the most important lessons learned during that period. Much of the western discussion regarding the so-called "recentralization of the seventies" fails to appreciate the different character of the system which grew out of the reform in contrast to the system prior to the reform, and so fails to identify these important lessons. During the late sixties under the NOS the branches of the then Industrie- und Handelsbank were evaluated on the basis of their performance as evidenced in an accounting category of profit, and they were operated on the principles of Eigenerwirtschaftlichkeit and materiellen Interessen. Without doubt this experiment insofar as the relations between the bank branches and the central bank was concerned was considered to have failed in certain respects, and so the banking system took on its current form in which neither of these principles is operative with respect to bank branch offices. It is not true that the same conclusions were made concerning material incentives and the evaluation of enterprises by profit for enterprises operating in the productive sectors of the economy. To the extent that branches of the economy in addition to the banking sector were also 'recentralized' it was an altogether different event from what occurred in the banking sector. The conclusion that was in fact made from the experiences with the bank branches and with productive enterprises was that the former could not be influenced in the same manner by material incentives, that there did not exist easily comparable categories of profit which could be used to evaluate bank managers. A study of the difference between the banking system and productive enterprises in a socialist economy therefore offers a rich subject for research to which the experiences of the GDR would make a valuable contribution. To date, the western literature has failed to take note of this important subject. I am indebted to Prof. Dr.sc. Karlheinz Tannert also of the Sektion Wirtschaftswissenschaft der Humboldt Universitaet for several discussions on this particular subject and for drawing to my attention the qualitatively different character of the lessons that were drawn from the history of experiments in both areas.

15. Discussion of the limited capacity of interest rates or 'the price of money' to equilibrate the supply and demand for loanable funds extends to the early neoclassical writings and has continued to the current field of information economics which has most carefully developed the theory utilized in this paper. The limits of the interest rate as a price, and the subsequent phenomenon of rationing has been analyzed most carefully in Joseph E. Stiglitz and Andrew Weiss, "Credit Rationing in Markets with Imperfect Information," American Economic Review, 71 (1981), 393-410. The subject was given careful empirical analysis in the classic work by Dwight Jaffe, Credit Rationing and the Commercial Loan Market, John Wiley & Sons, New York, 1971. As far back as 1942 F.A. Hayek recognized the exception to



the usual concept of a perfectly competitive market which was posed by the special character of a credit market in his article "The Ricardo Effect," Economica, 9 (May 1942), 127-152, esp. 138-139. Additional references for specific cases of the failure of a 'free' market to efficiently allocate credit or money capital due to the 'incompleteness' of markets and the special problems of information will be given in the footnotes following.

The most comprehensive article regarding the contractual restrictions and constraints often placed on loan contracts in the west is Clifford W. Smith and Jerold B. Warner, "On Financial Contracting: An Analysis of Bond Covenants," Journal of Financial Economics, 7 (1979): 117-161. Additional references regarding specific provisions will be given in the footnotes following.

16. Although analyses of the credit market in capitalist economies have long recognized that the interest rate cannot equilibrate the market for loanable funds in the same manner as a price can equilibrate supply and demand in a commodity market, western economists writing about socialist economies and the socialist banking system have seldom mentioned this complication. These writers often counterpose the administratively determined interest rates of fixed or limited range which one encounters in socialist economies to the alternative of a floating rate which would rise unconstrained in response to an increased demand for investment funds and which would thereby ration funds to those projects yielding the highest return. For example, George Garvy writes, "[In the Soviet Union] interest is treated merely as a service charge intended to contribute to meeting operating costs of the banking system. No attempt was made before the Reform to use the level of interest rates and their differentiation to influence the aggregate volume or distribution of bank loans and real investment, or to achieve equilibrium between the demand for and supply of loanable funds" (in Money in Soviet Union, p. 131, emphasis added). In his introduction to interest rate policies in Eastern Europe Adam Zwass summarizes, "In the original concept of credit policy, interest rates were designed mainly to cover the costs of bank activities; they were not the price of credit. Hence, interest rates were extremely low: 1-2 percent annually, or 3 percent for overdue credits. Interest was not the price of money, nor is it today -- even in Hungary, with its far-reaching reforms. There is no money or capital market to make this possible, that is, where the interplay between supply and demand could create an equilibrium interest" (in Money in the Eastern Europe, pp. 110-111, emphasis added). Compare these statements with the discussion by Stiglitz and Weiss of credit markets in a capitalist economy: "Increasing interest rates or increasing collateral requirements could increase the riskiness of the bank's loan portfolio, either by discouraging safer investors, or by inducing borrowers to invest in riskier projects, and therefore could decrease the bank's profits. Hence neither instrument will necessarily be used to equate the supply of loanable funds with the demand for loanable funds. ... The Law of Supply and Demand is not in fact a law, nor should it be viewed as an assumption needed for competitive analysis. ... The usual result of economic theorizing: that prices clear markets, is model specific and not a general property of markets -- unemployment and credit rationing are not phantasms" (in Stiglitz and Weiss, 1981, pp. 408-409, emphasis added).

As a final note it is interesting to compare the actual spread of interest rates prevailing in the United States at a given time for various types of debentures with the spread of interest rates legally applied by the GDR bank offices for different types of loans. In 1980 the annual interest rate earned on corporate bonds in the US varied between 11.94 percent for Aaa rated issues and 13.67 percent for Baa issues, interest rates on long term US Treasury bonds were in the area of 11.4 percent. In the GDR interest rates for loans on plant and equipment purchases can easily vary between 3.2 and 13 percent. Between the years 1954 and 1980 the real rate of interest earned on commercial paper in the US fluctuated within the bounds of 7 percentage points. The fluctuations in the rate of interest actually charged in the GDR is obviously impossible to obtain.

17. Regarding the application of differential interest rates due to the information produced during the negotiations for credit regarding the project, see the Kreditverordnung, II-3-(2), III-7-(10), and V-16-(1,c). Regarding the application of differential conditions due to similar cause, see the Kreditverordnung, III-7-(3) and V-16-(1,a).

18. Kreditverordnung II-2-(2), "Die Bank kann die Ausarbeiten bzw. Uebersarbeitung dieser Normen und Zielstellungen entsprechend den Rechtsvorschriften fordern."

Kreditverordnung II-4-(4), "Der Leiter der zustaendigen Bank hat das Recht, Entscheidungen der Leiter der uebergeordneten Organe zu verlangen, wenn Kombinate bzw. Betriebe nachgewiesene Reserven nicht planwirksam machen. Die Bank hat das Recht, an den Planverteidigungen bei den uebergeordneten Organen teilzunehmen."

19. The history of the power of the bank to require a higher financial contribution on the part of the enterprise, Eigenmittelanteile, is an important one for elucidating the issues at hand in establishing a material incentive system in a socialist economy and in identifying the boundary between an incentive system which gives to a management a stake in the success of an enterprise and an ownership or equity control on the part of the management in the allocation of capital. The former is the objective of the principle of 'materiellen Interessiertheit,' the latter represents a feature of capitalism: the successful construction of the former would be an example of die Beherrschung des begrenzten Wirkung des Wertgesetzes -- the command of the bounded operation of the law of value -- as an essential principle of the socialist transition to communism, while the latter would be the reappearance of capitalist forces within the socialist economy. Therefore a careful analysis of the various attempts made to apply this principle and the corresponding incentive control device on the part of the GDR planning system, and the conclusions made by the SED from these various experiences represent a valuable source for understanding this critical issue. For a more theoretical discussion of the distinction made between the application of incentive devices within the context of a socialist economy and the concept of 'market socialism' and other equations of these incentive structures with those inherent in capitalist economies, see the various contributions to Werner Kraus, Herausgeber, Buergerliche und kleinbuergerliche oekonomische Theorien ueber den Sozialismus nach dem zweiten Weltkrieg, uebersetzt von Guenter Wermusch, Akademie-Verlag, Berlin, 1980.

The power of the bank to require a higher financial contribution on the part of the enterprise in response to incomplete fulfillment of the

Kreditvoraussetzungen was extended during the NOS and was included as well in the first comprehensive credit law passed following the NOS:

"Verordnung ueber die Durchfuehrung der Kredit- und Zinspolitik gegenueber volkseigenen Betrieben, konsumgenossenschaftlichen Betrieben und sozialistischen Wohnungsbaugenossenschaften," GBl. II/4/72, p. 41, in II-2-(3) and V-17-(1,c), "Bei ungenuegenden Kreditvoraussetzungen kann die Bank unter Beruecksichtigung der oekonomischen Situation des Betriebes die Erteilung einer Kreditzusage bzw. den Abschluss eines Kreditvertrages unter Angabe der Gruende ... von der Beteiligung des Betriebes mit eigenen Mitteln zur Finanzierung zeitweiliger Planabweichungen abhaengig machen;..." See also Biefeld, Grundriss der Wirtschaftsrecht der DDR, p. 1078.

This particular clause does not appear in the new Kreditverordnung passed in 1982, although each of the remaining powers of the bank remain, including the power to reduce the level of credit granted, the power to require various conditions in the contract, and the power to require a Buergschaft. Instead the clause is replaced with a clause empowering the bank to charge differential interest rates in response to the incomplete fulfillment of the Voraussetzungen: see the Kreditverordnung, V-16-(1,c).

The removal of this power to adjust the Eigenmittelanteilung represents the type of decision about which we spoke above. Several points should be made about this change. First it represents a change in the arena of major capital investments for plant and equipment for which the magnitude of income variation which would follow from changing Eigenmittelanteilung is enormous. In the arena of working capital there remains flexibility on the part of the bank office about whether or not in any given case it should cover deviations from the planned quantity of expenditures and to what extent they should cover them, or whether the enterprise should cover those from its own funds. Moreover, for cooperatives as opposed to state owned enterprises a certain greater amount of leeway in establishing this contribution exists during the credit negotiations; see the "Erste Durchfuehrungsbestimmung zur Kreditverordnung -- Kreditgewaehrung an sozialistische Genossenschaften, kooperative Einrichtungen und volkseigene Betriebe der Land-, Forst- und Nahrungsgueterwirtschaft," I/6/82, -2-(2), p. 133. It may therefore be that the variation in Eigenmittelanteilung for Grundmittel, or plant and equipment, and the consequent variation in income to the enterprise represented the qualitative violation of the principle of the bounded operation of the law of value mentioned above. Second, the actual level of Eigenmittelanteilung remains a parameter to be established in the case of each proposal for investment even in the new Kreditverordnung, and how much flexibility exists in determining this parameter is unclear. For an indication that this is still a condition open to negotiation, or at least a parameter over which the bank exercises discretion, see Ehlert, et al., p. 189. It should be noted that each credit contract includes a clause in which the finally agreed upon level is specified. Finally, since each credit extension is paid back prior to the actual complete return from the project, an alteration in the level of the interest rate serves the same function as an alteration in the Eigenmittelanteilung as far as the incentive structure is concerned, and so the new provision in the 1982 Kreditverordnung may be a new legal embodiment of the same incentive objective.



20. A proof that this is possible is given in Donald Heckerman, "Motivating Managers to Make Investment Decisions," Journal of Financial Economics, 2 (1975), 273-292. For a clear presentation of the concept of an offer of a selection of contracts and the principle of self-selection, see Michael Rothschild and Joseph Stiglitz, "Equilibrium in Competitive Insurance Markets: an Essay on the Economics of Imperfect Information," Quarterly Journal of Economics, 90 (1976), 629-649. On the specific problem of the financial contribution of the enterprise management and of outside financiers, see Michael Jensen and William Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs, and Capital Structure," Journal of Financial Economics, 3 (1976), 305-360, and Stephen Ross, "The Determination of Financial Structure: the Incentive-Signalling Approach," Bell Journal of Economics, 8 (1977), 23-40.

21. See Hesse, *Die Stellung des Investitionskredites*, pp. 131 and 135. According to Hesse, the primary results of such negotiations in visible changes in project performance has been on 1) Arbeitsproduktivitaet, 2) Freisetzung von Arbeitskraefte, 3) Schichtauslastung, 4) Rueckflussdauer, and most importantly, 5) Grundfondsrentabilitaet (pp. 135-142). Granick documented a large degree of influence on the part of bank officers in the final disposition of a proposed investment project. Although he does not specify the type of results, he does indicate that about 25% of the applications are rejected on the first round, of which two-thirds are successfully modified while one-third or 8% of the original pool are ultimately denied credit and therefore financing (Enterprise Guidance, p. 159).

22. Kreditverordnung II-5-(4), "Die Bank hat das Recht, die weitere Kreditgewaehrung an Kombinatbetriebe, die ihre Plaene nicht erfuehlen, von der Bestaetigung der Massnahmen der Kombinatbetriebe durch den Generaldirektor des Kombinates oder von einer Garantieerklaerung gemaess Sektion 16 Abs. 2 abhaengig zu machen." V-16-(2), "Mit einer Garantieerklaerung verpflichtet sich der Generaldirektor des Kombinates, die Erfuellung der Kreditvoraussetzungen bzw. der Kreditbedingungen zu sichern. Werden die Kreditvoraussetzungen bzw Kreditbedingungen in der festgelegten Frist nicht erfuehlt bzw. Kredite nicht fristgerecht zurueckgezahlt, so hat der Generaldirektor finanzielle Mittel entsprechend den Rechtsvorschriften einzusetzen.

23. Kreditverordnung III-7-(3), "Die Bank hat das Recht, aus ihrer Kontrolle abgeleitete Forderungen gegenueber den Kombinat und Brieben zu stellen sowie eine Begutachtung der Aufgabenstellung und der Dokumentation zur Grundsatzentscheidung zu verlangen.

24. See Jensen and Meckling, "Theory of the Firm," and Ross Watts, "Corporate Financial Statements, a Product of the Market and Political Processes," Australian Journal of Management, 2 (1977), 53-75, and finally Smith and Warner, "Financial Contracting," pp. 143-146.

25. A sample list of Kreditbedingungen incorporated into the contracts analyzed by Hesse, "Die Stellung des Investitionskredites", is reproduced here; specific attention should be given to Bedingungen numbers 2.1, 3.1, 3.2, and 3.4, and 4.4:

1. Erreichen bestimmter Kennziffern der Effektivitaet lt. Grundsatzentscheidung

- 2.1 Nachweis der termingerechten Bauausfuehrung
- 2.2 Sicherung der Baufreiheit (Termin)
- 2.3 Nachweis der Einhaltung der Realisierungstermine
- 2.4 Erreichen der geplanten Kapazitaet
  
- 2.5 Einhaltung des Beratungsturnus zur Objektkontrolle (Bauablauf)
- 2.6 Einhaltung der geplanten Investitionssumme
- 2.7 Abrechnung der Durchfuehrung und des eingetretenen Nutzens
  
- 3.1 Nachweis der materiellen Absicherung, allgemein
- 3.2 Nachweis der vollen Vertragsbindung der Zulieferungen
- 3.3 Erarbeitung des Netzwerkes
- 3.4 Nachweis der Sicherung der Arbeitskraefte (Termin)
  
- 4.1 Nachweis der geplanten Schichtauslastung
- 4.2 Nachweis des geplanten Nutzens
- 4.3 Praezisierung des Projektes
- 4.4 Ueberarbeitung des Projektes zu verbindlichen Preisen
- 4.5 Ueberarbeitung der Grundsatzentscheidung (Termin)
- 4.6 Bestaetigung der Grundsatzentscheidung durch das WLO auf Basis verbindlicher Preise (Termin)
- 4.7 Ueberarbeitung der Grundsatzentscheidung fuer fehlende Teilobjekte
- 4.8 Uebernahme der Nutzenskennziffern in den Plan
  
- 5.1 Ueberarbeitung der Termine der Ausfuehrung
- 5.2 Erfuellung der Auflagen der ABI

26. See Smith and Warner, "Financial Contracting," p. 130.

27. Garvy's statement of "the five principles of socialist credit" policy includes two which appear to relate to this principle: the principles that the credit should be 'secured' and that it be 'repayable'. However, Garvy does not much elaborate on these two, and he does not specify that the repayment schedule should correspond in time with the returns to the project (see Garvy, Money in the Soviet Union, p. 114). Zwass also makes reference to the principle discussed here, with a stronger reference to the time correspondence of the payments with the returns from the investment, although again not clearly the exact principle presented here: "The repayment period was to be set in accordance with the planned turnover of enterprise stocks and was to be no longer than one year for short-term credits" (Zwass, Money in Eastern Europe, p. 118).

28. Hesse, "Die Stellung des Investitionskredites", p. 67.

29. Ehlert, et al., GKP, p. 179.

30. For a good general discussion of this principle in its incorporation into private lending arrangements in capitalist economies see Richard Brealey and Stewart Myers, Principles of Corporate Finance, 2nd edition,

1984, McGraw-Hill, New York, "Repayment Provisions," pp. 498-499, and the specific example offered on pp. 504-507. See also Smith and Warner, 1979, pp. 139-140, and for more detail on the risk analysis presented here see Stewart Myers, "Determinants of Corporate Borrowing," Journal of Financial Economics, 5 (1977), 147-175. A history and overview of the actual use of sinking funds is given in F.C. Thompson and R.L. Norgaard, Sinking Funds, Financial Executive Research Foundation, New York, 1967.

31. For an analysis of the value of such increased opportunity for renegotiation see Fischer Black and John Cox, "Valuing Corporate Securities: Some Effects of Bond Indenture Provisions," Journal of Finance, 31 (1976), 351-367.

Both a statement of the principle and a correct statement of the limitations of this device are given in Hesse, "Die Stellung des Investitionskredites": "Ueber die Rueckzahlungspflicht des Kredites wird schliesslich ein Teil der Kontrollfunktion des Kredites verwirklicht, zunaechst in der Weise, dass die kontinuierliche Tilgung der Mittel ein Zeichen der Planmaessigkeit des Reproduktionsprozesses des Kreditnehmers ist. Darin erschoept sich die Kontrollfunktion des Kredites aber keineswegs, und zwar deshalb nicht, weil auf diese Weise stets nur ein bereits eingetretener Rueckstand signalisiert werden koente, ausserdem, weil die Ausreichung von Investitionskrediten in der wirtschaftspraxis zwar objektgebunden, die Tilgung jedoch fondsgebunden erfolgt. Das heisst: planmassige Tilgung resultiert nicht notwendigerweise aus dem eingetretenen Effekt bei der finanzierten Investition, sondern beansprucht insgesamt die Fonds der Wirtschaftseinheit (p. 67)."

32. See Edward Zinbarg, "The Private Placement Loan Agreement," Financial Analysts Journal, July-August 1975, pp. 33-35, 52, esp. 34, and Smith and Warner 1979, p. 129-130. For a general discussion of the informational content of various financial ratios and accounting data as it pertains to risk and the lending decisions, see Brealey and Myers, 1984, pp. 569-587 and pp. 639-657, and J.O. Horrigan, "The Determination of Long Term Credit Standing with Financial Ratios," Empirical Research in Accounting: Selected Studies. Supplement to Journal of Accounting Research, 1966, 44-62.

33. Kreditverordnung III-7-(2), "Die Gewaehrung von Grundmittelkrediten wird von der Einhaltung der mit der Grundsatzentscheidung festgelegten Aufwands- und Nutzenskennziffern, Bauzeiten und Inbetriebnahmetermine sowie zwischen den Auftraggebern und Auftragnehmern vereinbarten Kriterien und Termine fuer die Leistung von Abschlagszahlungen abhaengig gemacht. Die Kombinate und Betriebe sind verpflichtet, die mit der Grundsatzentscheidung festgelegten Kennziffern des Aufwandes und des oekonomischen Nutzens in die Plaene einzubeziehen, ihre Einhaltung vorhaben- bzw. massnahmenbezogen abzurechnen und auf der Grundlage des abgeschlossenen Kreditvertrages der Bank nachzuweisen."

34. Note that in both Smith and Warner, "Financial Contracting," and in Zinbarg, "The Private Placement," covenants concerning financial data represent the dominant set of covenants discussed to the complete sacrifice of any discussion of control of technical parameters. Smith and Warner in fact argue that control over technical parameters will be inherently difficult for the creditor (see p. 130), although the argument is not given in detail and does not address various special situations in which the alternative may be true.

35. Brealey and Myers, Principles of Corporate Finance, offer a good example which deserves to be quoted at length: "In recent years there has been considerable interest in a new type of loan that is tied as far as possible to the fortunes of a particular project and that minimizes the exposure of the parent. Such a loan is usually referred to as project finance and is the specialty of the large banks. ...British Petroleum used project finance to pay for development of its huge Forties Field in the North Sea. ... A syndicate of 66 major banks agreed in 1972 to lend a total of \$945 million -- the largest industrial bank loan in history. But instead of lending the money directly to BP they lent it to a company called Norex, which was controlled by the banks. ... The banks consented to bear the ultimate risk that the oil reserves were insufficient to service their loan. However, they were protected against three other hazards. The first was the possible failure of BP Development to construct the necessary facilities. The agreement, therefore, specified in considerable detail the manner in which the field should be developed and BP guaranteed that its subsidiary would carry out this plan" (pp. 504-505).

MIT LIBRARIES



3 9080 004 481 864









Date DBASEMENT

Lib-26-67

Bar Code  
On Last  
Page

